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The Competitive Impact of China on Southeast Asia's Labor Markets*

Rajah Rasiah**

1 Introduction

China's entry in the World Trade Organization (WTO) in 2001 left several labor-intensive-economies worried over their export prospects in world markets. While the spotlight was very much on India and Mexico – two economies that witnessed a sharp contraction in apparel exports since the 1990s – Southeast Asian economies had also quietly monitored these developments for fear of losing their export markets. Despite these anxieties, China and Southeast Asia are working jointly to establish a combined free trade region by 2010.

China's expansion in global trade and investment flows is not a new phenomenon. Since rapprochement with the United States in the 1970s, economic transition has stimulated export expansion and inward Foreign Direct Investment (FDI) flows to China. The communist regime has carefully managed integration into the capitalist system making it the world's chief exporter of labor-intensive goods such as garments. Hence, China's entry into the WTO is unlikely to generate a sudden gigantic splash and a massive shakeout in global trade and investment flows. However, the implementation of the Trade Related aspects of Investment Management (TRIMs) in particular is expected to bring wide ramifications for developing economies.[1] In addition to the reduction of tariffs and removal of actionable subsidies and quotas, the Multi-Fiber Agreement (MFA) will end by the end of 2004. The latter will remove the significance of quotas as a basis for targeting textile and garment production. While these developments on paper are considered to enhance export penetration in the major markets, it will also expose Southeast Asian economies to cheaper imports. With a massive labor force, China by far poses the largest threat to labor-intensive exporters in Southeast Asia. Its large labor force, low wages and agglomeration economies make China a far more attractive site for FDI.

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** Professor and Senior Research Fellow, UNU-INTECH. I am grateful to Norbert von Hofmann, Erwin Schweisshelm, Roland Feicht and the FES for renewing their interest in research on trade unions and labor markets. I am grateful to Sanjaya Lall for sharing his UNIDO paper prepared with Albedejeho (2001) with me, Gerd Botterweck and others at the Singapore Workshop for their insightful comments. I am also grateful to Ad Notten for his generous help in getting materials from the library. Brunei and East Timor were excluded from analysis. the former because of its economic reliance on just oil, and the latter because it became independent only recently and hence does not have sufficient data for analysis.

The increased competition to export and attract FDI could heighten pressures to race to the bottom in the Southeast Asian economies. Low wages, poor labor standards – including the utilization of child labor – is expected to apply pressure on Southeast Asian labor markets. Governments – responding to the interests of firms – could assume short-termist strategies to tighten controls on trade unions – to compete with exports from China and to slow down wage growth. Neo-liberal arguments posit that liberalization will free factors of production so that market-determined allocations will eventually see the employment of resources for factor incomes to equalize. However, power asymmetry between firms, institutions and governments, prevalence of structural interdependence, and complementarity between and increasing returns in certain industries, and inherent rigidities in labor markets make such contentions suspect (see Rasiah, 2000). In addition, contrary to claims, even when approving sanctions on the powerful nations, developing economies have had more deleterious effects than the developed under the WTO.

This paper aims to examine the impact of China's entry in the WTO on Southeast Asian labor markets. The first section examines China's potential impact by comparing its manufacturing valued added and export structure, and FDI with Southeast Asia.

2 Analytic Framework

While competitiveness is relatively easy to conceive, it is difficult to estimate inter-country data to show it concretely. Apart from relatively inexhaustive instruments, the lack of micro-level data at the industry level makes comparisons of competitiveness difficult. Hence, this paper uses second best methods by deploying selected proxies to examine the potential competitive impact of China's greater integration in world and regional markets for labor markets in Southeast Asia. The use of historical data has both its strengths and weaknesses. Its strengths include the projections that could be made to comprehend the potential economic consequences of greater integration. The limitations include the potential diversions to projected growth that can be expected from policy shifts as well as random factors.[2] Nevertheless, this approach seems to be the most plausible for evaluating the impact of China on Southeast Asian labor markets as forms the prime basis for projecting the future.[3]

The paper examines China's impact first by evaluating comparatively the effects of greater integration involving production, trade, FDI flows and institutional support. These variables will definitely have a bearing on the capacity of Southeast Asia to compete following China's greater integration in global and regional markets. The paper subsequently looks at the impact of these variables on Southeast Asian labor markets. Because labor force, unemployment rates and

wages are labor market variables they are discussed in the latter section – despite their obvious link with competitiveness. It should also be noted that China is already considerably integrated in world markets.

The four proxies examined are manufacturing value added, manufactured exports, FDI flows and infrastructure support. The size and technological structure of manufacturing value added was evaluated, but it does not present a good picture of competitiveness. Manufactured exports were examined at the aggregate level, including technological structure and shares of critical exports in world markets. This proxy is a better indicator of what to expect when greater integration takes place. FDI flows – both the overall shares and its relative intensity in gross fixed capital formation – give an indication of China's likely impact on the FDI dependent economies of Southeast Asia. Basic and R&D infrastructure offer a comparative assessment of institutional support for industrial firms – domestic and foreign owned – in the region. Fuller integration would mean that the institutional support facilities would play a greater role in the location of industries in the combined region.

Finally, the implications of China's greater integration in world and regional markets are examined from observed shifts in trade, FDI flows and institutional support facilities on labor markets in Southeast Asia. The size of the labor force of the countries involved, employment size and elasticity, unemployment rates, labor productivity, wages and unit labor costs, trade unions and labor standards will have a strong bearing on both static competitiveness as well as impact.

3 China and Southeast Asia Compared

Southeast Asia as a whole had 36.6 percent and 71.1 percent of China's 1.25 billion population and GDP respectively in 1999,[4] making it vulnerable to greater trade and investment liberalization, particularly involving labor-intensive economic activities – both low and high technology. China's per capita income in 1995 prices of US$769 in 1999 was much higher than that of Cambodia, Vietnam, Myanmar and Laos, and was only slightly lower than that of Indonesia and Philippines.

Increased markets from integration can benefit regional specialization based on the economic law of comparative advantage. On the one hand it offers complementarity potential for a regional division of labor to support differentiated inter-country exports and to a smaller extent expand export demand. On the other hand China's massive labor force and export manufacturing capability will provide stiff competition for Southeast exports and FDI inflows. Much of the manufacturing value added generated in Southeast Asia compete with industries in China. In addition, Southeast Asian economies are not positioned above China in the learning curve involving several industries

– e.g. garments and electronics assembly. Hence, China's further integration could cause some hollowing out in Southeast Asia. However, China is already considerably integrated in global markets and hence greater integration is not going to suddenly cause a disarray in Southeast Asian economic activities. Besides, given labor market and bureaucratic rigidities and safety clauses contained in trade agreements to avert economic calamities, Southeast Asia's industries are unlikely to evaporate explosively.

This section compares important economic conditions of China and Southeast Asia. The first examines the structure of manufacturing value added. The second looks at the export structure. The third evaluates FDI flows and the fourth infrastructure support facilities.

Manufacturing Value Added

China's manufacturing value added in the combined region increased steadily in the 1990s to its peak of 75.9 percent in 1998 (see Figure 1, Table 1). The expansion was particularly rapid in the 1990s when China became more integrated in export markets. The sheer size of China's manufacturing value added, which has grown significantly faster than any of the Southeast Asian economies in the 1990s presents significant economic implications for the latter. In addition to economies of scale and scope, China enjoys united command for launching complex economic activities that can out-compete similar but fragmented operations in Southeast Asia. China's manufacturing structure would benefit from greater differentiation and division of labor than Southeast Asia's under its unified bureaucratic regulation.

China's manufacturing value added structure is accounted largely by medium and high technology products, albeit confined to lower value added segments of value chains. Singapore enjoys greater specialization in such products – with stronger participation in design operations. Only Malaysia among the remaining Southeast Asian economies, compares favorably with China. Indonesia, Malaysia, Thailand and Philippines made significantly greater upgrading than China in the period 1985-97, but the absolute size of China's operations leaves these gains relatively small. Cambodia, Laos, Myanmar and Vietnam have much smaller share of medium and high tech products in manufacturing value added. This can be seen from the technological content of manufactured exports (see next section), which is the more important basis of comparison for cross-border movement of products. The slow increase in product upgrade within manufacturing value added involving China compared to the Southeast Asian economies is also a reflection of its size as well as massive FDI inflows involving the latter following the Plaza Accord of 1985 and the withdrawal of the GSP from the Asian NIEs in February 1988. Given China's gigantic size, export shares alone – where upgrading has taken place extensively – could add

competitive pressures in Southeast Asia. China's greater integration with Southeast Asia would of course offer room for import penetration from Southeast Asia. However, that would depend on the capabilities of these economies to take advantage of it. It will be difficult as the industrial structures involving most of them are similar to China's. Only Singapore's appears favorably placed in higher value added activities, but even that advantage could be wiped out given China's size and developmental efforts.

The slow upgrading in manufacturing value added suggests that China has not restructured significantly in the period 1985-97, thereby offering Southeast Asian economies considerable room to reorganize industry. While this is very well the broad story of China's manufacturing sector, faster restructuring involving its manufactured exports makes its impact serious.

Table 1: Technological Structure of Manufacturing Value Added, 1985 and 1997

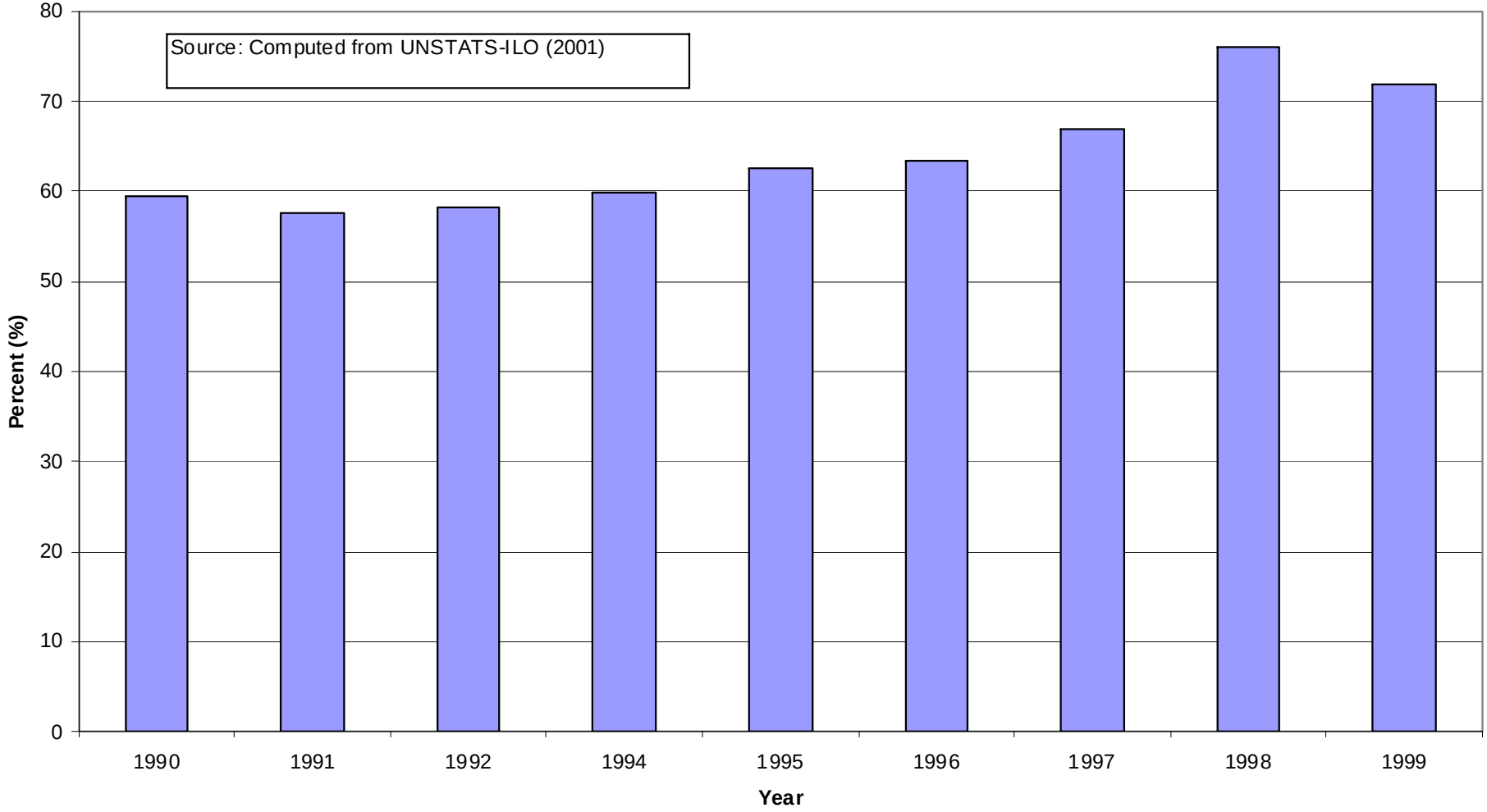
	1985			1997		
	MHT	LT	RB	MHT	LT	RB
China	**49.1**	**20.8**	**30.1**	**50.9**	**17.9**	**31.2**
Thailand	17.8	30.3	51.9	38.6	24.5	36.8
Malaysia	46.9	9.8	43.3	60.1	11.4	28.5
Indonesia	25.2	14.6	60.2	40.3	24.8	34.8
Philippines	22.4	9.7	67.9	36.3	10.9	52.8
New Tigers	**28.1**	**16.1**	**55.8**	**43.8**	**17.9**	**38.2**
Hong Kong	38.3	51.9	9.8	52.5	30.2	17.3
Korea	46.6	23.5	29.9	60.5	16.8	22.7
Singapore	66.9	12.6	20.5	79.9	8.1	12.0
Taiwan	43.1	28.3	28.5	56.5	18.5	25.0
Mature Tigers	**48.7**	**29.1**	**22.2**	**62.4**	**18.4**	**19.3**
E. Asia Exc. China	**38.4**	**22.6**	**39.0**	**53.1**	**18.2**	**28.7**

Source: Extracted from Lall and Albaladejo (2002: Table 2).

Exports

Southeast Asian economies managed to sustain rapid long term growth through export expansion – particularly manufactured exports from the early 1970s in the case of Singapore and Malaysia, and the 1980s and 1990s involving Thailand and Indonesia, and Philippines, Vietnam and Cambodia respectively. While competition for inward-oriented industries is likely to rise, the biggest threat China poses is in export markets. The fundamental question facing many of the Southeast Asian governments is whether China's full-scale entry into

Figure 1: China's Share of Manufacturing Value Added in Combined, 1990-99



open trade will slice off their markets. In short will the entry of a gigantic ship in a slowly growing pool leave a smaller space for Southeast Asian boats to swim. It is of course true that China has already been exporting and hence its entry into the WTO cannot be viewed as a new entrant forcing out old ones. While this is indeed true and therefore should not cause a sudden splash, it is also the case that the abolition of several previously constraining agreements – such as the MFA – will make China a bigger target for labor-intensive products. In addition, China's build up in high tech infrastructure and given its larger and cheaper labor force likely to shift some of the focus on high tech industries there.

Southeast Asia's overall exports was 4.6 times that of China's in current US dollars in 1970, rising to its peak of 6.4 times in 1978 (see Figure 2). Economic transition and rapid manufacturing expansion in China has seen this figure fall dramatically to 1.1 times in 1998. While the ratio rose slightly again in 1999, the abolition of MFAs, removal of actionable subsidies and quotas, and lowering of tariffs is expected to raise further China's exports. China fared even stronger in manufactured exports. Southeast Asia's manufactured export ratio with China was 1.4 in 1984, which rose to its peak of 3.1 in 1993 (see Figure 3). However, the ratio has fallen sharply since to 0.9 in 1999. The relative expansion in China's manufacturing exports from 1993 also exemplifies China's rising export competitiveness against its decline involving Southeast Asia in this period.

The technological content of the manufactured export structure is another indicator that suggests that China is raising its competitive profile against its Southeast Asian neighbors (see Table 2). The new tigers in Southeast Asia have kept their lead over China on the share of high tech products. Singapore is the only exception in Southeast Asia, but its tiny size is unlikely to stop China's expansion. What Table 2 shows is that China and the Southeast Asian market economies have expanded their share of high tech products in total exports. However, it also shows that China has experienced far higher growth than its Southeast Asian neighbors have. China also leads in the exports of several medium tech items. For example, China exported over 20 and 12 percent of the world's radio receivers and clocks and watches respectively in 1998 (Lall and Albadejeho, 2001). Given Southeast Asian firms' reliance on foreign R&D support – whether by foreign affiliates or local companies (through licensing) – it would not cost much for firms to relocate in China to take advantage of China's large and cheap labor force.

The significance of China's exports over Southeast Asia also becomes obvious from Table 3. Southeast Asia's five new tigers enjoyed a market share of almost three times that of China in 1985. However, as China manufactured exports expanded sharply in the 1990s, its overall export share became equal to the new tigers in 1998. China accounted for 17 percent of manufactured exports from the

Figure 2: China's Share in Combined Exports, 1970-99

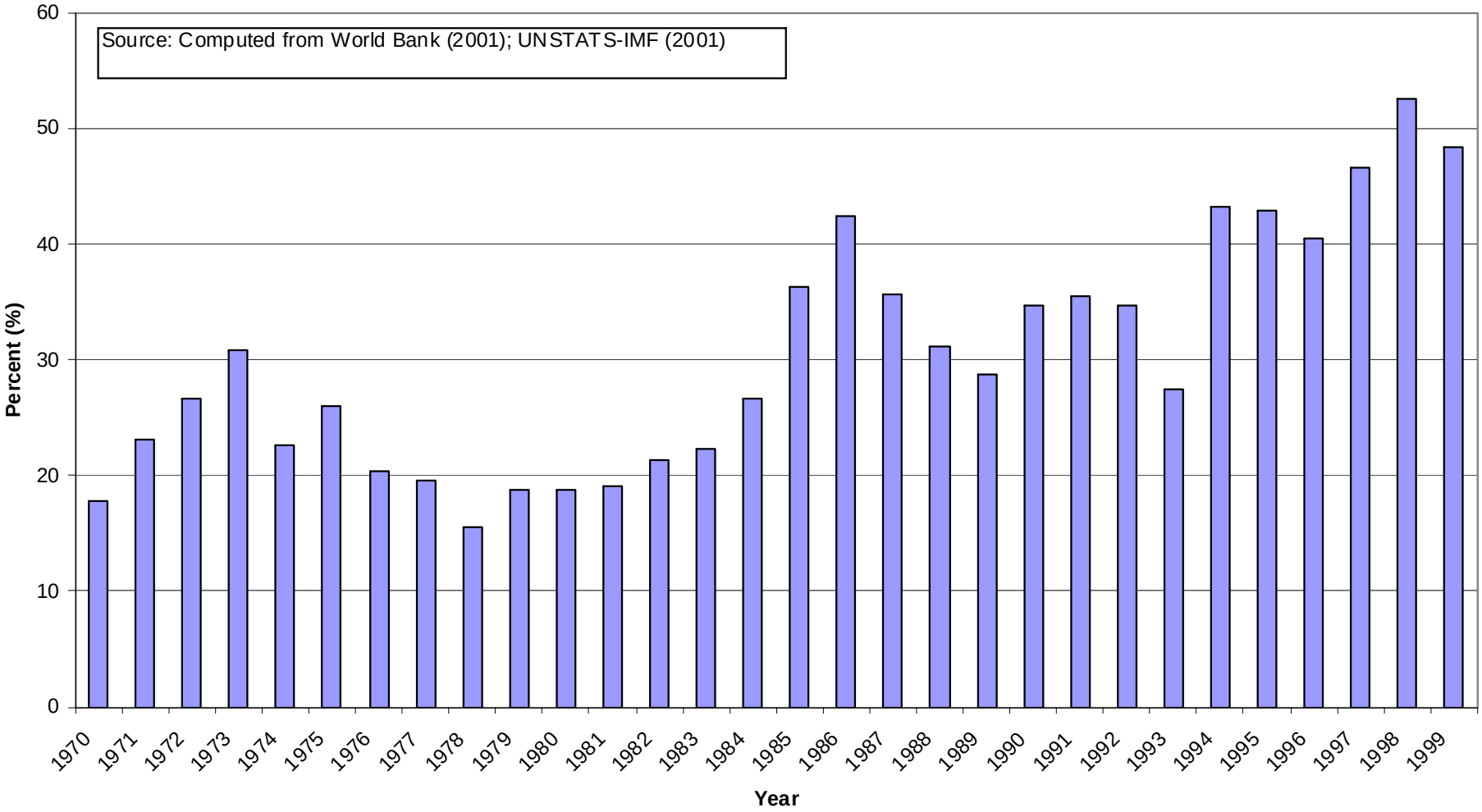


Figure 3: China's Share in Combined Manufactured Exports, 1984-99

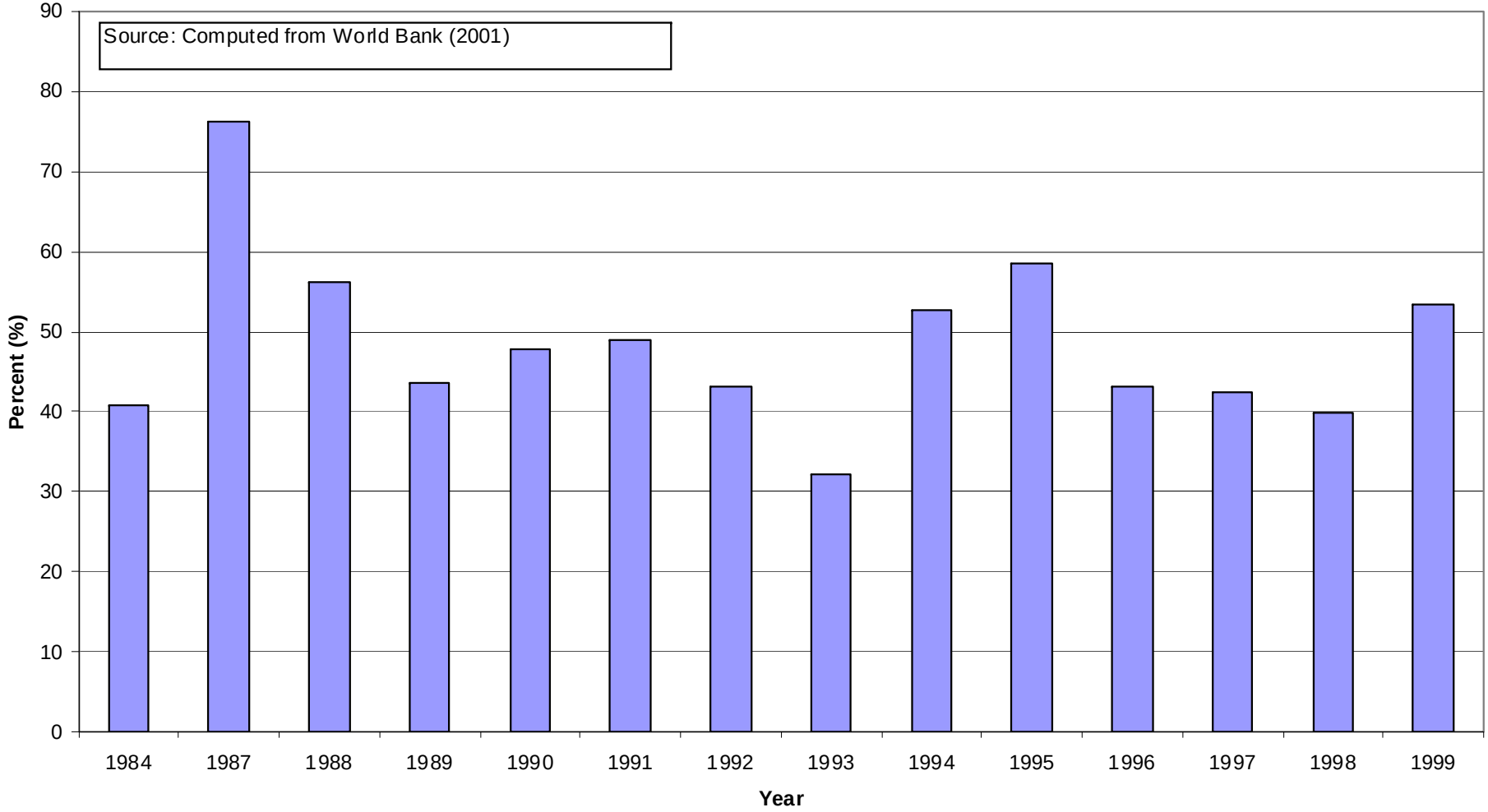


Figure 4: World Market Share, Electronics Products, China and Malaysia, 1997

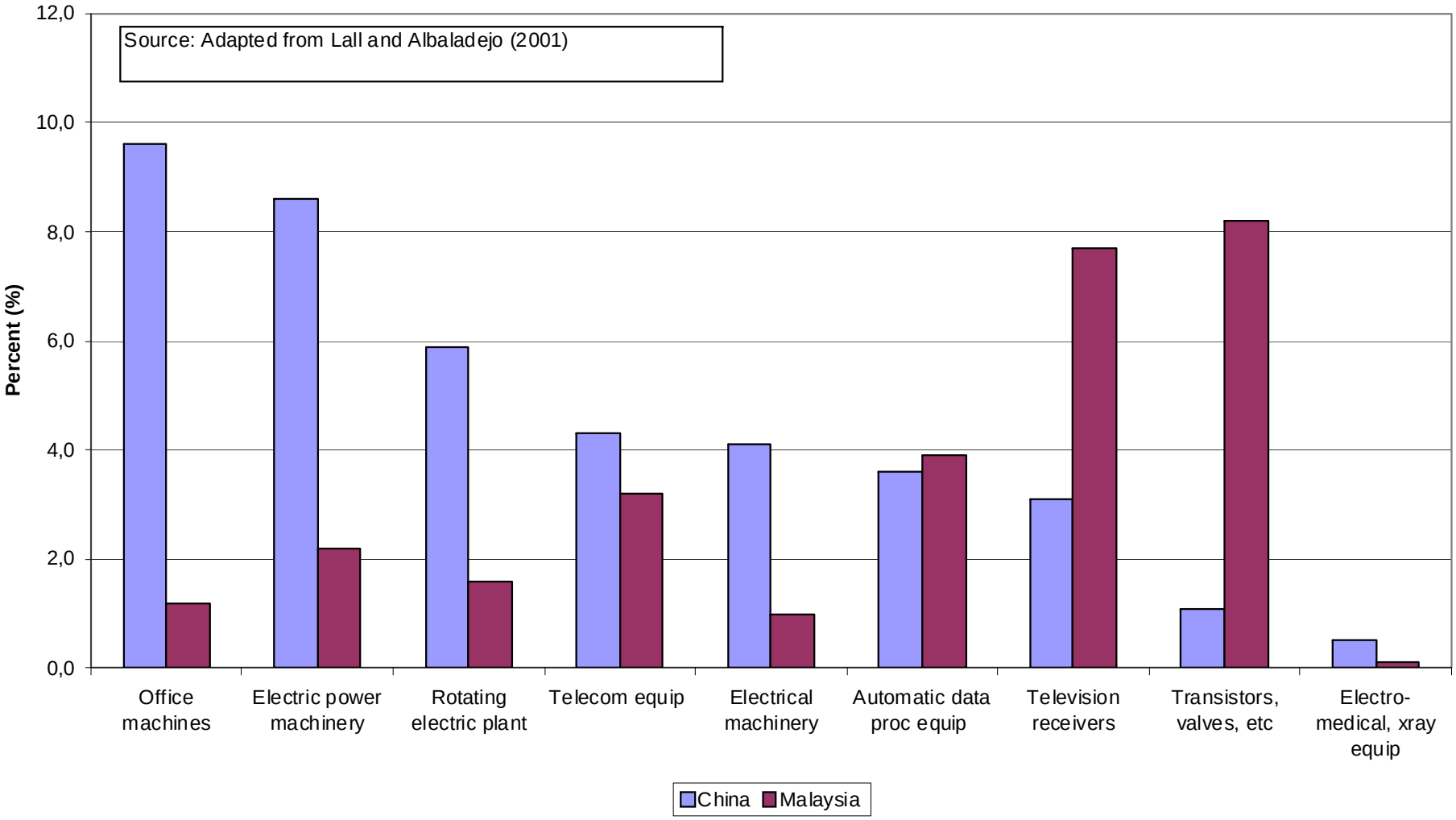


Table 2: Manufactured Export Structure, 1985 and 1998

	1985				1998				Average Annual growth rates (1985-98)			
	HT	MT	LT	RB	HT	MT	LT	RB	HT	MT	LT	RB
China	**5.2**	**12.2**	**43.7**	**38.8**	**20.0**	**20.2**	**50.0**	**9.9**	**43.2**	**34.2**	**30.5**	**16.2**
Thailand	4.7	22.0	35.4	37.9	34.8	20.5	25.3	19.3	41.4	20.6	18.2	15.1
Malaysia	26.9	11.4	8.0	53.7	52.1	20.3	11.0	16.7	23.0	22.2	19.8	6.9
Indonesia	3.0	6.4	15.5	75.2	9.7	18.5	33.0	38.8	27.2	26.0	23.1	10.4
Philippines	11.0	9.0	24.1	56.0	67.4	10.9	14.5	7.2	38.8	22.5	16.1	3.1
New Tigers	**10.2**	**12.2**	**25.3**	**52.3**	**36.8**	**18.1**	**26.8**	**18.4**	**28.0**	**22.2**	**19.3**	**9.2**
Hong Kong	14.8	19.1	63.0	3.2	26.0	13.2	56.3	4.5	7.5	0.0	2.0	5.7
Korea	12.8	37.2	41.4	8.6	29.8	38.5	21.0	10.7	19.1	11.9	5.9	13.5
Singapore	24.5	23.4	8.6	43.5	60.2	18.7	7.0	14.1	22.1	12.0	12.1	4.5
Taiwan	16.2	21.1	52.9	9.9	36.6	27.5	30.4	5.5	17.6	12.7	5.8	5.5
Mature Tigers	17.1	25.2	41.5	16.3	38.2	24.5	28.7	8.7	18.7	11.3	5.4	7.1
E. Asia exc. China	**13.6**	**18.7**	**33.4**	**34.3**	**37.5**	**21.3**	**27.7**	**13.5**	**20.8**	**12.8**	**7.6**	**8.0**

Source: Extracted from Lall and Albaladejo (2001: Table 4).

developing economies in 1998, making it the largest among them. This is a dramatic rise from the 3.1 percent it accounted for in 1985 (Lall and Albaladejo, 2001). While China still lags behind Singapore on high technology, its expansion rate suggests that it would not take long before it surpasses the latter. China's grip on low technology raises considerable concerns for Indonesia, Philippines and the transitional economies of Cambodia, Laos, Myanmar and Vietnam. China already had a healthy lead in world export market shares in six of the nine important electronics products over Southeast Asia's chief electronics exporter, i.e. Malaysia (see Figure 4). China also enjoyed a big lead in the eight major low technology exports over Indonesia and Thailand (see Figure 5). Integration with China should mean increased competition in the low-technology as well as high technology products exported by Southeast Asian economies.

Compared to Southeast Asia, China has particularly expanded sharply in low technology products. China enjoyed world market shares of over 15 per cent in five low technology products - led by toys and sporting goods and followed by footwear (Lall and Albaladejo, 2001). Garment exports from Malaysia and Thailand had already declined from the 1990s following the exhaustion of labor reserves and rising wages. Cambodia, Vietnam and Laos were important recipients of garment manufacturing from Malaysia and Thailand. Vietnam, Cambodia and Laos experienced rapid garment export expansion in the 1990s with FDI inflows from Northeast Asia, Thailand, Malaysia and Europe in particular. Indonesia and Philippines also absorbed considerable export

manufacturing in garments in the 1990s – but has faced a hollowing out to China, Cambodia and Vietnam from 1999. Quota provisions under the MFA were very much as important as low wages in the relocation of these industries (see Rasiah 1998; 2000). However, the phasing out of the MFA should remove that advantage and hence has set into motion another round of relocation of these industries again. Several firms reported leaving Indonesia and Philippines in 2001-2002.[5] Cambodia, Laos and Vietnam could face the same situation once they no longer enjoy least developed country (LDC) privileges, though their lower wages could sustain low technology manufacturing. Given that garment constituted the chief manufactured export of Indonesia, Cambodia, Vietnam and Laos in 1997, it could still bring considerable ramifications for their labor markets.

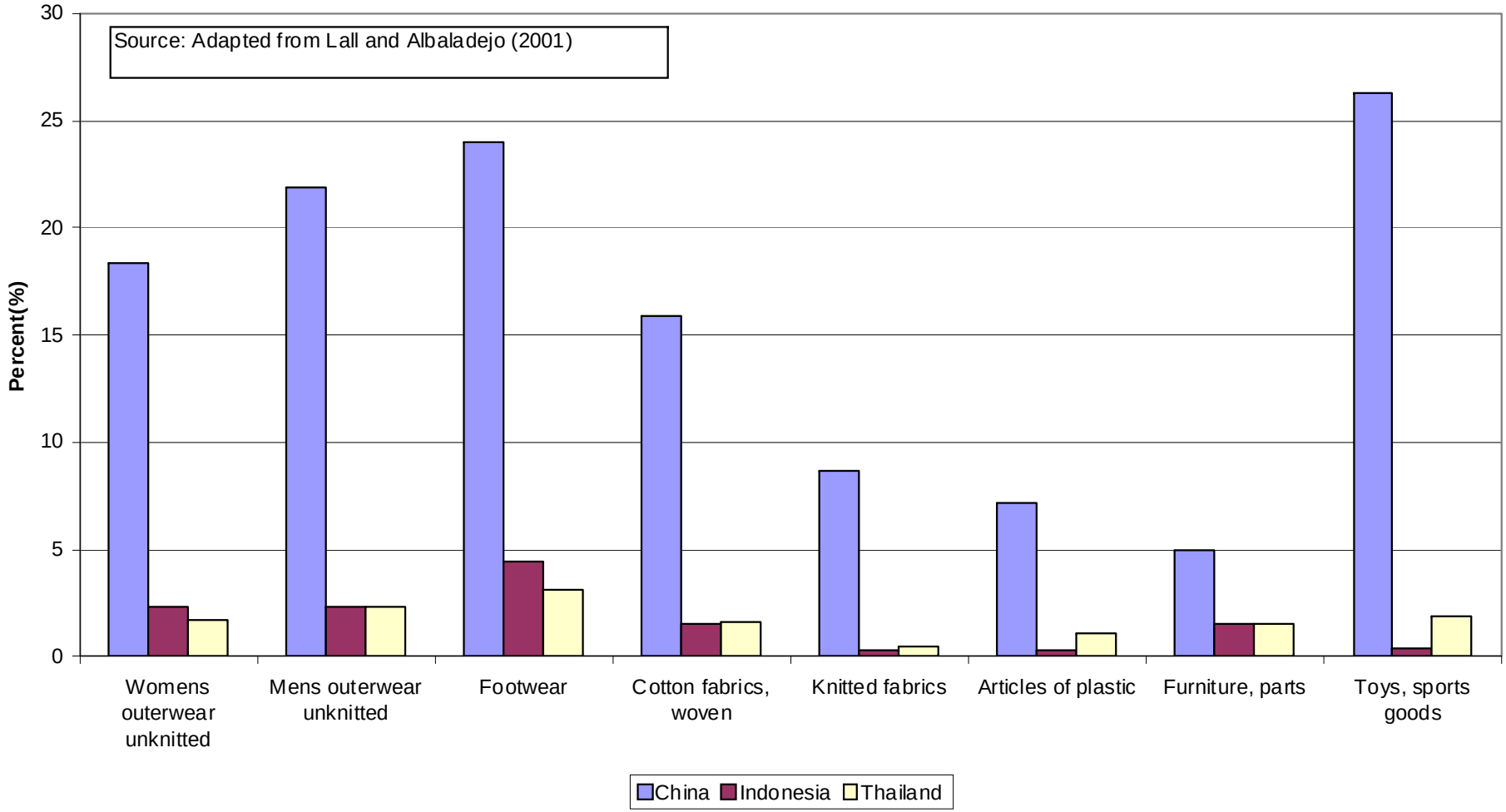
China's high tech, medium tech and low tech exports grew by 43.2, 34.2 and 30.5 percent per annum on average between the years 1985-98 (see Table 2). Using past rates, Lall and Albaladejo (2001) calculated that China's high tech exports would reach US$201 billion in 2003, far exceeding the highest Asian NIE, i.e. Singapore, figure of US$168 billion. The faster growth of Chinese industries over Southeast Asia's also means that incomes in the former is rising faster to expand effective demand. The rise in incomes coupled with extensive restructuring should gradually reduce the export-intensity of output involving China so that much of the imports and exports will be sourced domestically in the long run.

Table 3: World market share of manufactured exports, 1985 and 1998

	1985					1998				
	Total	HT	MT	LT	RB	Total	HT	MT	LT	RB
China	**0.5**	**0.1**	**0.1**	**1.1**	**0.8**	**3.9**	**3.1**	**2.0**	**10.4**	**2.2**
Thailand	0.3	0.1	0.2	0.5	0.5	1.0	1.5	0.6	1.4	1.2
Malaysia	0.7	1.1	0.2	0.3	1.5	1.5	3.2	0.8	0.9	1.5
Indonesia	0.3	0.1	0.0	0.2	1.0	0.6	0.2	0.3	1.1	1.4
Philippines	0.2	0.1	0.0	0.2	0.4	0.7	1.8	0.2	0.5	0.3
New Tigers	**1.4**	**1.3**	**0.4**	**1.3**	**3.4**	**3.9**	**6.7**	**1.8**	**3.9**	**4.3**
Hong Kong	1.2	1.1	0.6	4.2	0.2	0.5	0.6	0.2	1.6	0.1
Korea	2.3	1.7	2.1	5.0	0.8	2.8	3.4	2.8	3.1	1.7
Singapore	1.5	2.2	0.8	0.7	2.7	2.4	5.8	1.2	0.9	2.0
Taiwan	2.3	2.2	1.2	6.4	0.9	2.5	3.6	1.8	4.0	0.8
Mature Tigers	**7.2**	**7.1**	**4.6**	**16.3**	**4.6**	**8.2**	**13.3**	**5.9**	**9.6**	**4.6**
E. Asia exc. China	**8.7**	**8.4**	**5.1**	**17.6**	**8.0**	**12.1**	**20.0**	**7.7**	**13.6**	**8.9**

Source: Extracted from Lall and Albaladejo (2001: Table 5).

Figure 5: World Export Market Share, Selected Low Technology Products, China, Indonesia and Thailand, 1997



FDI Flows

China became the largest recipient of FDI among developing economies in the 1990s and hence although Southeast Asia has some of the most FDI-dominated economies, greater integration between these economies could shift more foreign capital to the former. Arguments about the potential for greater cross border inter-industry linkages may not hold because of major differences in wages, infrastructure support and structural interdependence. In the presence of a united common market of China and Southeast Asia, it is possible to imagine the spread of FDI across borders. However, monetary union between these economies does not look possible at least in the near future and given China's labor force, much of the differentiation and division of labor in the combined region could be confined to its own borders.

As shown in Figure 6, China only accounted for 6.5 percent of the combined net FDI inflows to the region in 1982. This figure rose sharply to 69.7 percent in 1999. Both the sheer size and the rapid increase in the overall FDI flows to the region suggests that China is indeed a major threat to Southeast Asia. The removal of the MFA and direct and freer trade would make China's labor force even more attractive for labor-intensive and low technology FDI.

While China accounts for much of the FDI, it is not the most FDI-dependent economy in the region. The high share of domestic investment acts as a catalyst to attract more FDI inflows to China. As a proportion of GFCF, FDI reached its peak of 15.1 percent in 1994 before contracting gradually to 10.5 percent in 1999 (see Table 4). Indonesia faced a negative share in the late 1990s following the political explosion that accompanied the financial crisis. The other was Malaysia – traditionally strong on FDI - had a lower share of FDI in GFCF in the late 1990s – caused primarily by exhaustion in labor reserves and the contagion from the financial crisis. For both political and economic reasons respectively Indonesia and Malaysia appear less attractive for large-scale FDI inflows in the near future. Cambodia, Thailand, Laos and Vietnam became more FDI-dependent than China in the 1990s. Thailand faced a higher rise in net FDI inflows in the late 1990s as a consequence of a sharp depreciation in assets from the financial crisis and capital flight. The transitional economies were able to attract labor-intensive low wage manufacturing activities in the late 1990s. Singapore has always relied strongly on FDI. These developments suggest that China enjoys greater leverage to attract more FDI than its Southeast Asian neighbors and hence may divert scarce capital from employing more labor.

Basic and R&D Infrastructure

It has been argued that China will not be able to attract high tech investment and compete in higher value added export markets because of its specialization in labor-intensive low technology activities. While the labor-intensive economies

Figure 6: China's Share of Net FDI Inflows in Combined Total, 1982-1999

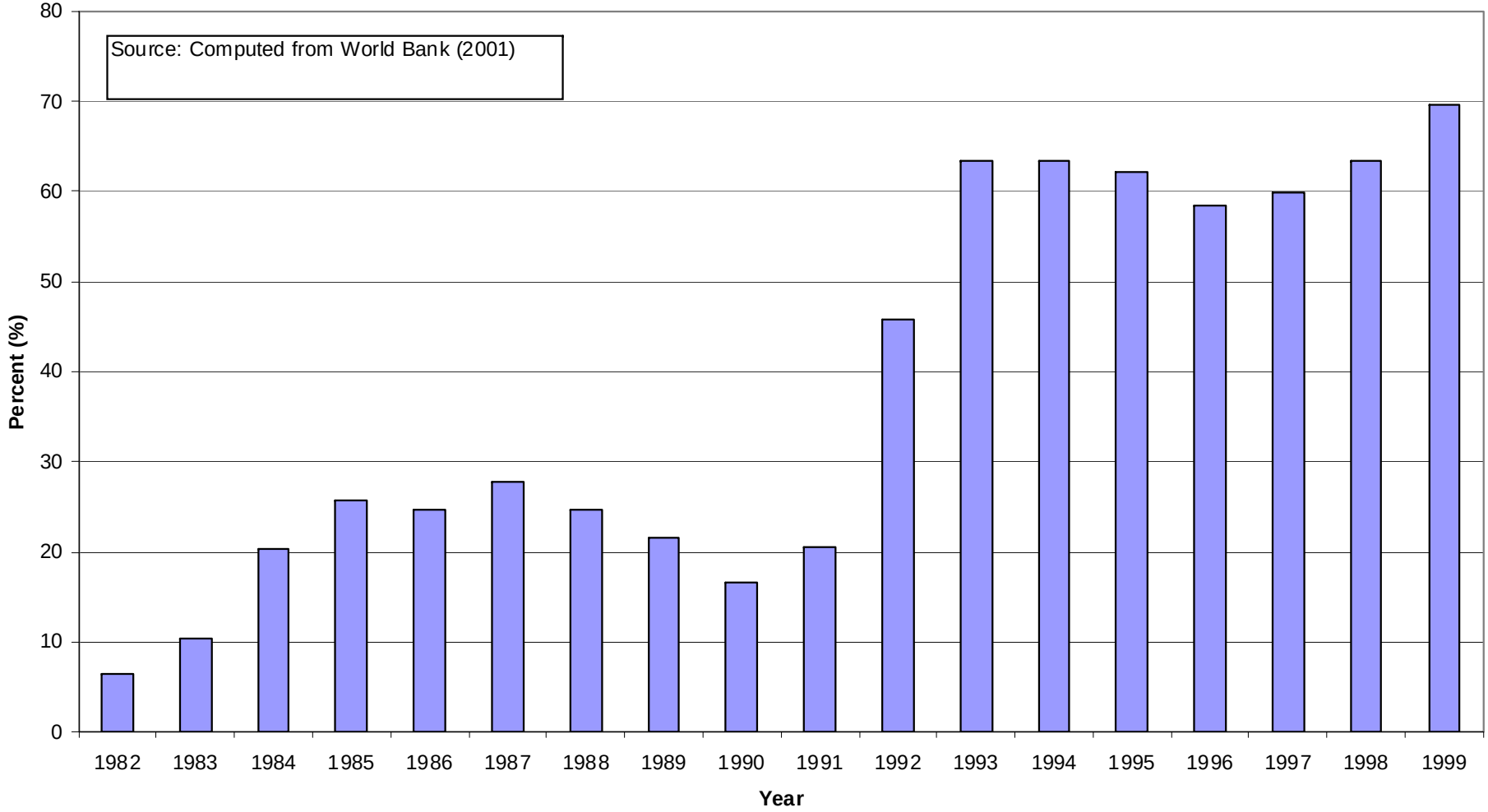


Table 4: Net FDI Flows, 1970-99

	1970	1975	1980	1985	1990	1995	1999
Cambodia	0.00				0.00	23.54	
China	0.00	0.00	0.00	1.44	2.83	12.54	10.52
Indonesia	5.43	6.26	0.96	1.27	3.11	6.73	-8.13
Malaysia	9.85	14.07	12.36	7.96	16.38	10.78	8.83
Lao PDR				0.00		20.81	
Philippines	-1.75	2.13	-1.12	0.25	4.95	8.88	4.03
Singapore		12.89	22.76	13.92	41.50	24.99	25.10
Thailand	2.37	0.55	2.01	1.49	6.92	2.97	23.83
Vietnam					1.91	42.85	22.07

Source: Computed from World Bank (2001)

with weak infrastructure such as the transitional economies of Southeast Asia, Philippines and Indonesia will come under tremendous pressure, China's build up in basic and R&D infrastructure suggests that the others would not be spared.

Figure 7 was constructed to locate China's comparative strength in basic and R&D infrastructure against the Southeast Asian economies. The basic infrastructure index (BII) was constructed using primary school enrolment rates, doctors per thousand population and number of main telephone lines. The selection of the proxies was based on basic infrastructure attributes and availability of data. Housing, computer supply and internet lines were not used to capture the transitional economies of Myanmar, Laos, Cambodia and Vietnam where data was more difficult to obtain These proxies were than normalized for 180 economies where data was available, and using the following formula.

$$X_1 = (Vj - V_{min})/(V_{max} - V_{min}) \quad (1)$$

Where X_1 refers to proxy 1, Vi to its for country i, and V_{min} refers to the minimum value attained among the countries, and V_{max} the maximum value attained among the countries.

$$BII = 1/3[X_1..X_3] \quad (2)$$

Where BII refers to the basic infrastructure index and X_1, X_2 and X_3 proxies of gross secondary school enrolment rates, doctors per thousand people and main telephone lines. Each proxy was given equal weights because of no *a priori* basis for differential emphasis.

The same procedure was used to compute the R&D index (RDI).

$$RDI = \tfrac{1}{2}[X_4+X_5] \quad (3)$$

Where RDI refers to the R&D index and the proxies X_4 and X_5 R&D investment in Gross National Investment and scientists and engineers per million people.

The lack of R&D investment data on Cambodia, Laos and Vietnam prevented the computation of a full series involving the RDI. Only Singapore outperformed China's basic and R&D infrastructure in 1998. While Malaysia outwardly enjoys better infrastructure than China as a whole, the BII of the latter exceeded the former slightly. Despite its massive population, China seems to demonstrate higher levels of BII and RDI than Malaysia. Vietnam comes relatively close. Philippines, Thailand and Indonesia lag behind. The past pre-occupation non-market oriented infrastructure may still disadvantage especially Vietnam, which began *Doi Moi* in 1989. Myanmar, Cambodia and Laos face a bleak situation as these economies neither have the basic infrastructure nor a comparable labor force size to compete with China. Nevertheless, these figures reveal a stark fact that China enjoys potentially strong infrastructure support to better stimulate firms' operations than its Southeast Asian neighbors. Only Singapore enjoys a lead in these indicators to differentiate its product niche. However, given its tiny size and China's pace of expansion, even Singapore may face problems.

While patents are not an exhaustive measure of innovating ability, its close relationship with R&D infrastructure (see Rasiah, 2002) makes it a useful instrument to examine cross country differences in patenting capabilities. China recorded the highest number of 12,786 patents by residents in 1997 (see Figure 8).[6] Singapore had 8,188 patents. The rest had very small numbers. Using patents as a measure, China clearly demonstrates far stronger innovating capability then most of the Southeast Asian economies. Singapore is the only exception, but still lagged behind China.

It can be seen that China's greater integration in global markets under the WTO and subsequently with AFTA in 2010 is likely to create wide ramifications for the Southeast Asian economies. China's greater integration and its consequent effect on industrial relocation were conspicuous from the late 1980s. China's enormous size and similarity of manufactured exports structure, and its continued success in attracting inward FDI could pose serious problems for Southeast East Asian economies. The rapid upgrading of manufactured exports and expansion in infrastructure – basic and R&D – means that even technologically superior Singapore may not be spared. The implications are likely to be most profound involving tradable industries.

Figure 7: Basic and R&D Infrastructure Index, 1998

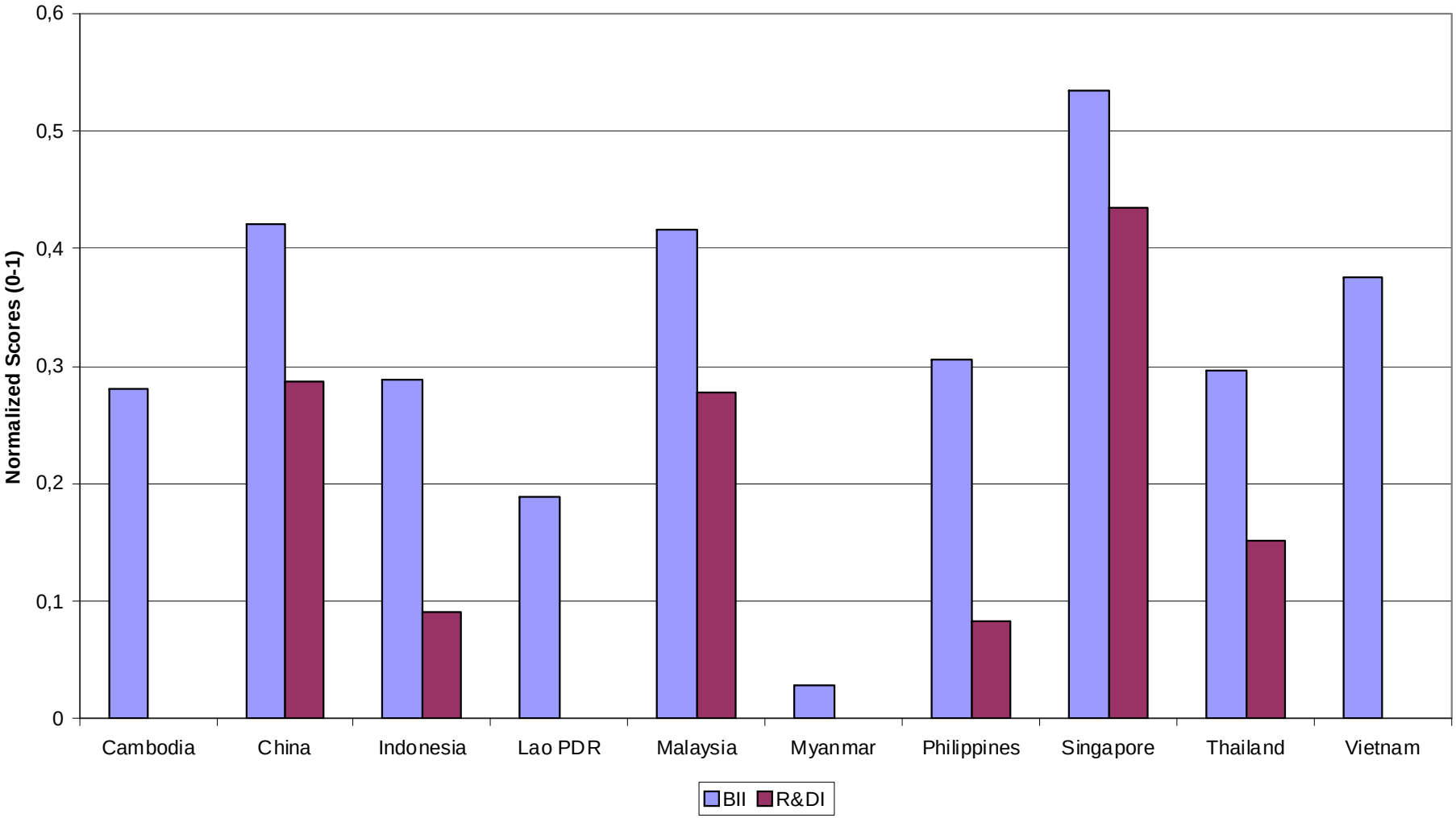
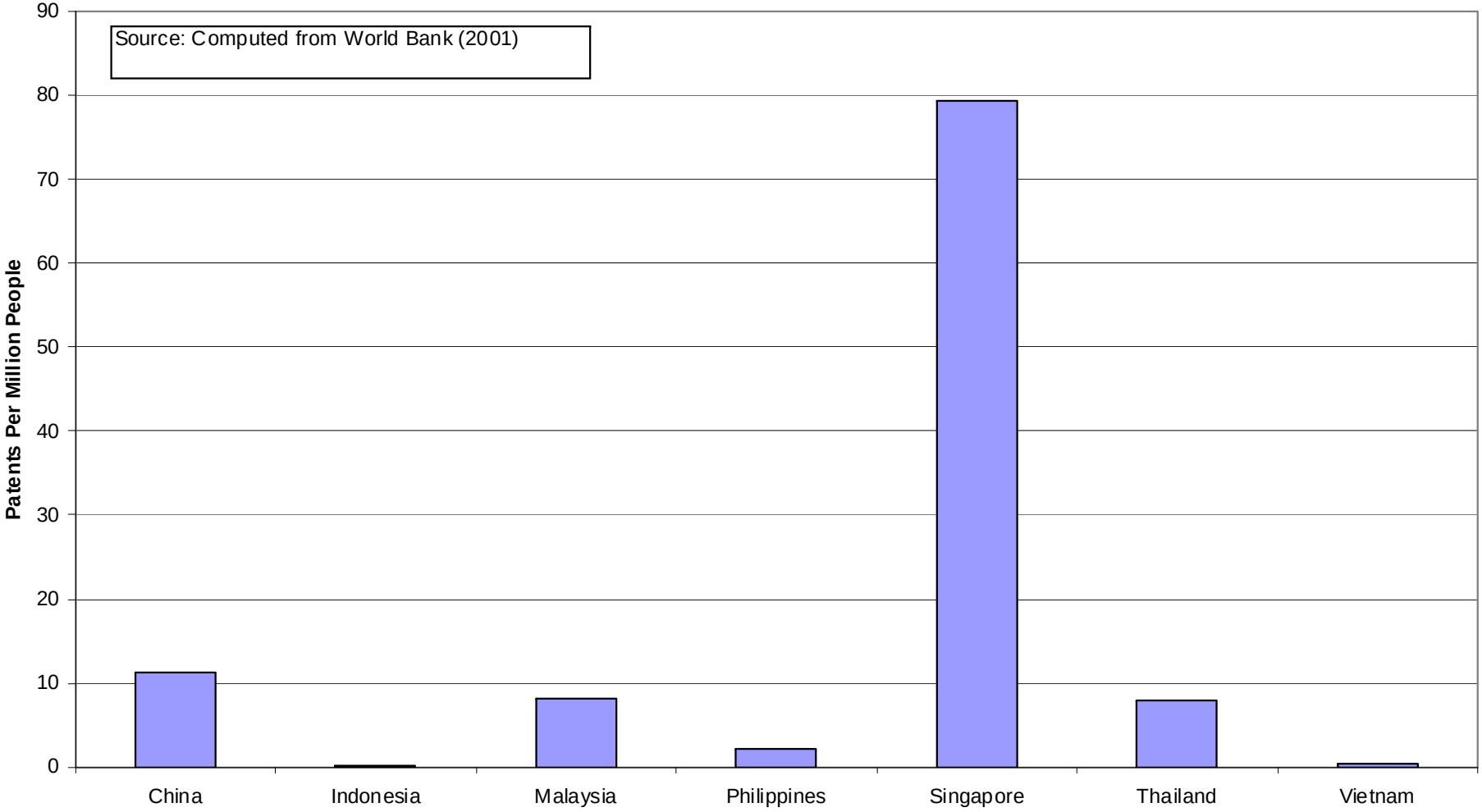


Figure 8: Resident Patents Applications, 1998



Implications for South East Asian Labor Markets

The previous section established the competitive threat posed by China following its accession to WTO and subsequent integration with AFTA by 2010, which is likely to increase the pressure for restructuring in Southeast Asia. The pressure has already been felt as several firms reported relocating to China especially labor-intensive and knowledge-intensive electronics industries from Indonesia, Malaysia, Thailand, Philippines and Singapore since the late 1990s.[7] Southeast Asian economies have also demonstrated their versatility in adapting to crises – especially the extremely strong trade dependent Singapore, Malaysia and Thailand – so that industrial restructuring have helped overcome downswings. However, only Singapore has managed to regulate restructuring without significant impoverishment to its workers. This section draws implications for labor markets in Southeast Asia. It focuses on China's labor force capacity to absorb further economic expansion and what that could mean for labor markets in Southeast Asia.

Employment and Unemployment

China's labor force grew much more slowly than Southeast Asia's over the period 1960-99, but still accounted for 75 percent of the region's combined total in 1999 (see Figure 9). China's new addition to the labor force still accounted for 56.7 percent of the addition to the combined region in 1999. This huge share could obviously apply more pressure on Southeast Asia as greater integration in world and regional markets would attract more exports and FDI inflows. China's surge in attracting FDI inflows and export manufactures since the 1990s to some extent came at the expense of Southeast Asia. With greater integration following accession to WTO and with AFTA in 2010, China's labor force and lower wages would have a bigger bearing on industrial growth in Southeast Asia. China's massive labor force and low wages would discourage FDI outflows.

Table 5 shows the composition of economies in the combined labor force in the period 1960-99. China's industrial structure could pull industries away from low-income economies of Cambodia, Laos, Vietnam, Indonesia and Philippines as well as from middle income economies of Malaysia and Thailand. The labor force in these economies too small to offer significant economic benefits from agglomeration. Singapore has a tiny labor force, but its focus on shifting to high value added activities has offered the room to stave competition from China. However, agglomeration economics, sustained growth in science and technology institutions and cheaper production costs has attracted even some high tech operations to China.

China enjoyed a steady rate of employment growth since 1960, slowing down gradually from 1990 as the base expanded and technological transition shifted emphasis to high tech exports (see Table 6). However, China still added more to

its labor force in the 1990s then Southeast Asia combined. China's and Southeast Asia's labor force expanded by 78.9 and 46.1 million workers respectively in the period 1990-99.[8] Employment elasticity typically rises as labor absorption rises in the early stages of economic development when unemployment rates are expected to be high. Singapore and China turned this stage in the early 1980s (see Table 6). The transitional economies show a rising employment elasticity trend, which is expected given their orientation to export markets from essentially the 1990s. Philippines faced high employment elasticity in 1995-99, which is consequence of the re-emergence of export manufacturing following de-industrialization and stagnation from the 1980s. Malaysia's high employment elasticity is in addition to slow GDP growth in the late 1990s, is also a reflection of continued reliance on labor-intensive exports. Indonesia and Thailand had negative employment elasticities in this period because of the sharp decline in GDP caused by a severe financial crisis. These results suggest that Indonesia, Philippines, Thailand and Malaysia could face problems to sustain employment absorption following greater integration of China in global markets. Malaysia has already embarked on aggressive foreign labor deportations.

Lall and Albaladejo (2001) reported that overall manufacturing wages in Philippines was 5.4 times that in China in 1997. Wages in Singapore, Malaysia and Thailand are higher still. Broken by low tech and high tech industries, the differential between 1997 wages in China, Malaysia and Thailand was also enormous. While Chines wages have grown faster than most Southeast Asian economies, the gap is still huge. For example, average wages in low technology industries in China was almost three times and over six times that of Thailand and Malaysia respectively in 1997 (see Figure 10). The gap involving high tech industries was even higher – over five and eight times respectively. Only the transitional economies of Myanmar, Laos, Cambodia and Vietnam are expected to lower wages. Hill (2000: Table 8) reported that hourly wages in textile manufacturing in China (50 US cents an hour) in 1994 slightly higher than that of Vietnam. On the basis of wage cost alone, it could be argued that Vietnam and to a less extent Cambodia could sustain garment and textile manufacturing despite greater integration with China. It is little wonder that firms reported in 2001 and 2002 the relocation of similar firms from Thailand and Philippines to China, Cambodia, Laos and Vietnam.[9] However Cambodia, Laos and Vietnam lack the infrastructure to support horizontal integration in garment and textile manufacturing and hence is likely to retain only some parts of low value added segments in value chains. This development is very much expected with the expected termination of the MFA by the end of 2004.

Unemployment data on developing economies is generally unreliable. Besides, given the definition for employed is when eligible people are working for an

Figure 9: China's Labor force Share in Combined, 1960-99

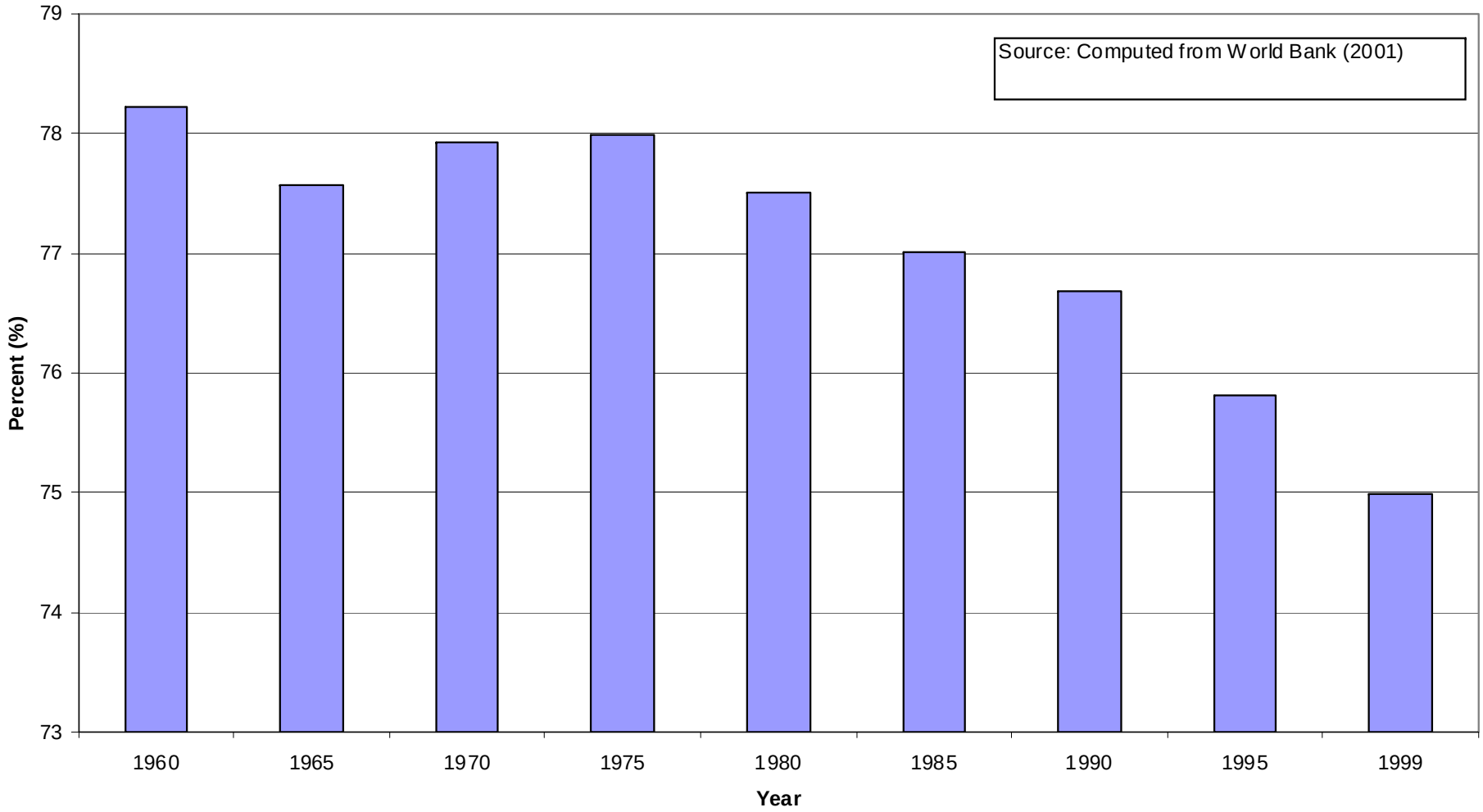


Table 5: Composition of the Combined Labor Force, 1960-99 (%)

	1960	1965	1970	1975	1980	1985	1990	1995	1999
Brunei	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Cambodia	0.63	0.66	0.65	0.60	0.53	0.53	0.54	0.58	0.61
China	78.22	77.57	77.92	77.98	77.50	77.01	76.69	75.82	74.99
Indonesia	8.17	8.38	8.24	8.21	8.43	8.72	8.93	9.43	9.92
Malaysia	0.63	0.68	0.69	0.71	0.76	0.78	0.81	0.87	0.93
Myanmar	2.49	2.56	2.52	2.46	2.47	2.46	2.38	2.36	2.38
Laos	0.26	0.26	0.26	0.25	0.24	0.23	0.23	0.23	0.24
Philippines	2.35	2.52	2.58	2.63	2.71	2.78	2.78	2.96	3.11
Singapore	0.12	0.13	0.13	0.15	0.16	0.17	0.18	0.19	0.19
Thailand	2.99	3.17	3.20	3.33	3.51	3.58	3.62	3.65	3.63
Vietnam	4.14	4.05	3.78	3.67	3.69	3.72	3.83	3.90	3.97

Source: Computed from World Bank (2001).

Table 6: Average Annual Employment Growth and Elasticities, 1960-99

Growth	1960-65	1965-70	1970-75	1975-80	1980-85	1985-90	1990-95	1995-99
Brunei	4.5	4.6	6.1	5.3	4.8	4.6	3.2	2.3
Cambodia	2.3	2.3	1.0	-0.3	2.4	2.8	3.0	2.1
China	1.2	2.5	2.9	2.0	2.2	2.3	1.4	0.8
Indonesia	1.9	2.1	2.8	2.7	3.0	2.9	2.8	2.1
Malaysia	3.1	2.6	3.6	3.5	2.8	3.2	2.9	2.6
Myanmar	1.9	2.2	2.4	2.2	2.3	1.7	1.5	1.2
Laos	2.1	2.1	2.1	1.1	1.9	1.9	2.2	1.8
Philippines	2.8	3.0	3.3	2.7	2.8	2.4	2.9	2.1
Singapore	3.5	2.5	4.9	3.9	3.6	3.0	2.7	2.0
Thailand	2.5	2.6	3.7	3.2	2.7	2.6	1.8	0.9
Vietnam	0.9	1.1	2.3	2.2	2.5	3.0	2.0	1.4
Elasticity								
Brunei				0.5	-1.3	11.6	1.9	
Cambodia							0.5	0.8
China	3.4	0.5	0.6	0.4	0.2	0.3	0.1	0.1
Indonesia	1.0	0.3	0.4	0.4	0.5	0.4	0.4	-7.0
Malaysia	0.5	0.4	0.5	0.4	0.6	0.5	0.3	0.9
Laos						0.5	0.3	0.4
Philippines	0.5	0.6	0.6	0.5	-2.2	0.5	1.3	0.8
Singapore	0.5	0.2	0.5	0.5	0.6	0.4	0.3	0.5
Thailand	0.4	0.3	0.7	0.4	0.5	0.3	0.2	-1.8
Vietnam						0.6	0.2	0.3

Source: Computed from World Bank (2001)

hour or more a week and the absence of unemployment welfare benefits, unemployment figures in developing economies are generally low. Despite having the world's largest labor force, China only had an unemployment rate of 3.1 percent in 1998 (see Table 7). Underemployment rates may be more useful but the paucity of data makes analysis difficult. It is believed that between 45-55 percent of the labor force in Indonesia and Philippines were underemployed in

1998.[10] While the Asian financial meltdown in the late 1990s pushed up unemployment rates throughout East and Southeast Asia (see Rasiah, 1998), the increased integration of China in the world market and the slow pace of technical change in the Southeast Asian economies had already left Indonesia, Malaysia, Philippines and Thailand in a precarious position even before the currency crisis erupted. Unemployment rates in Indonesia, Malaysia, Philippines and Thailand rose following the financial crisis in the late 1990s. Unless a coherent strategy is worked out, full-scale integration is likely to undermine employment rates in these economies. Cambodia, Laos, Myanmar and Vietnam could manage to retain some labor-intensive industries. Because of their underdeveloped status and high levels of underemployment, cutthroat competition in labor markets could pressure a fall in real wages in these economies. However, their small labor forces would restrict their capacity to compete with China.

Table 7: Unemployment Rates, 1980-1998

	1980	1985	1990	1995	1998
China	4.9	1.8	2.5	2.9	3.1
Indonesia	1.7	2.1	2.5	7.2	5.5
Malaysia	5.6	6.9	5.1	2.8	4.9
Philippines	4.8	6.1	8.1	8.4	9.6
Singapore	3.0	4.1	1.7	2.7	3.2
Thailand	0.8	3.7	2.2	1.1	3.4

Source: World Bank (2001)

Labor Productivity

Productivity differentials are one critical indicator of competitiveness that will have a strong bearing on industrial restructuring in the combined region. While differences in industrial specialization will continue to sustain growth and subsequent trade based on static comparative advantages even under circumstances of productivity differentials, the similar composition of China's industrial sectors with Southeast Asia suggests that it will have a strong bearing.

With the exception of the transitional economies, the enormous resource rents and participation in higher value added activities gave the remaining Southeast Asian economies an enormous lead in labor productivity (see Figure 12 and Table 8). However from about 1980, upgrading and structural change following increasing integration in the global economy has helped China to continuously close the gap. China's labor productivity grew faster in the period 1990-95 and 1995-99 then any of the Southeast Asian economies (see Table 9), which helped close its distance with the latter. China's labor productivity growth was higher than the region's combined total since 1980 (see Figure 13).

Figure 10: Wage Differentials, China Against Malaysia and Thailand, 1997

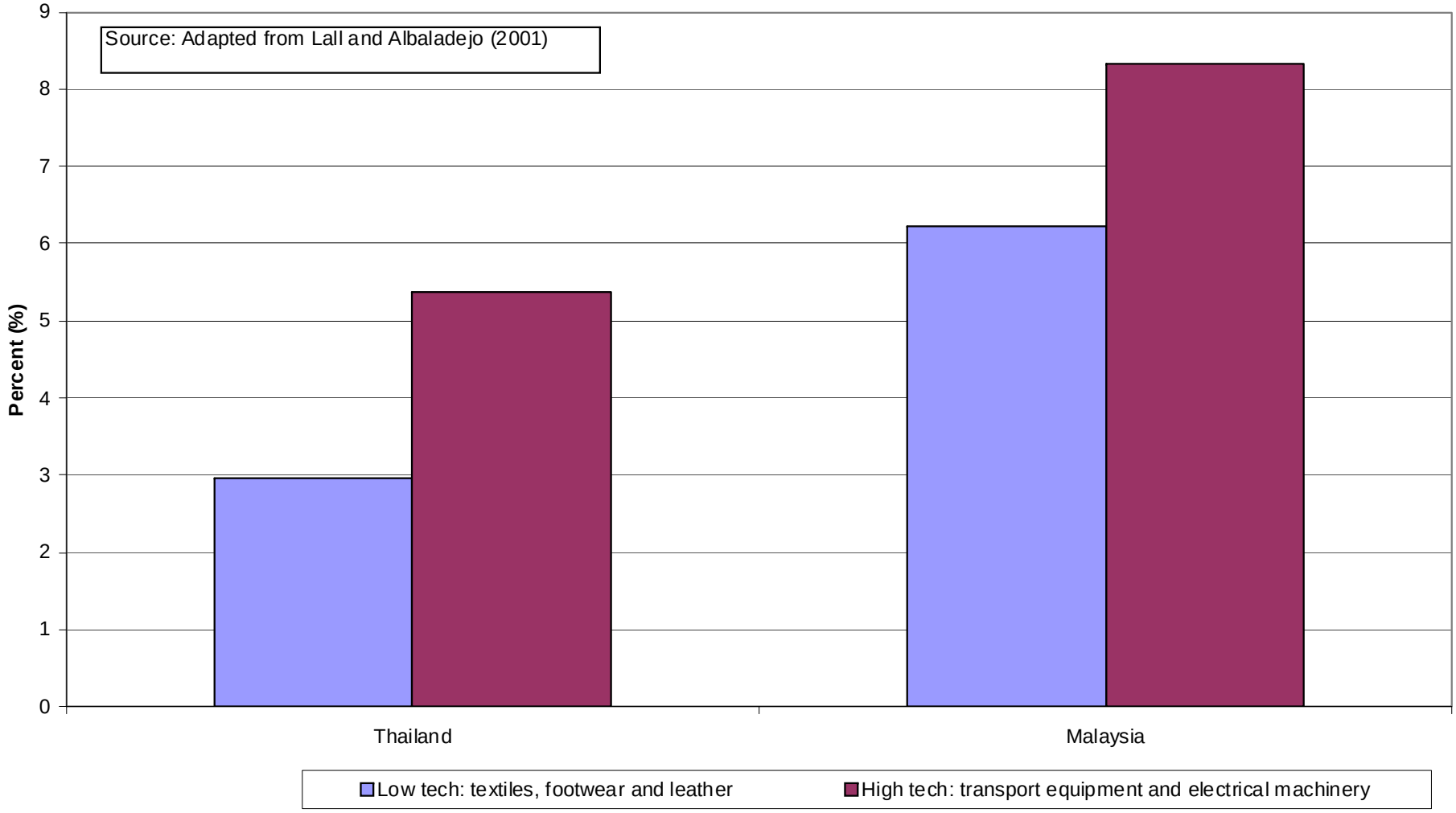


Table 8: Labor Productivity Differentials, 1960-99

	1960	1965	1970	1975	1980	1985	1990	1995	1999
Brunei				251.3	267.8	117.8	74.5	42.0	NA
Cambodia							0.8	0.5	0.4
China	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Indonesia	3.0	3.2	3.4	3.8	4.2	3.2	3.0	2.3	1.6
Malaysia	13.3	16.6	17.2	18.2	19.5	14.6	13.4	11.1	8.6
Laos						1.3	1.1	0.8	0.7
Philippines	8.7	10.3	9.7	9.8	9.8	5.3	4.6	2.7	2.1
Singapore	38.4	47.0	66.8	74.4	78.3	59.3	59.4	49.0	41.3
Thailand	4.3	5.6	6.7	6.6	7.0	5.3	6.0	5.0	3.5
Vietnam						0.8	0.7	0.6	0.5

Note: Figure measured by $[Y/Li][Y/Lc]^{-1}$ where Y, L, i and c refer to GDP, Labor force, country i and China respectively.
Source: Computed from World Bank (2001)

Table 9: Labor Productivity Growth, 1960-99 (%)

	1960-65	1965-70	1970-75	1975-80	1980-85	1985-90	1990-95	1995-99
Brunei				4.7	-8.0	-4.0	-1.5	NA
Cambodia							2.9	0.7
China	-0.8	2.7	2.2	3.3	8.4	5.3	10.5	7.2
Indonesia	0.1	4.1	4.9	5.1	2.5	4.2	4.9	-2.9
Malaysia	3.7	3.4	3.4	4.9	2.2	3.5	6.4	0.5
Laos						2.3	4.1	3.9
Philippines	2.4	1.6	2.4	3.2	-4.0	2.3	-0.7	0.7
Singapore	3.3	10.2	4.4	4.4	2.5	5.3	6.3	2.7
Thailand	4.5	6.4	2.0	4.6	2.6	7.6	6.6	-1.8
Vietnam						1.7	6.1	5.2

Note: Figures refer to average annual growth rates using GDP in 1995 US$.
Source: Computed from World Bank (2001)

Past rates suggest that China's labor productivity could easily overtake that of its Southeast Asian neighbors over time. Viewed together with its massive labor force and low wages, China's greater integration in global and regional markets could raise the pressure on Southeast Asian labor markets.

Manufacturing Wages and Unit Labor Costs

Wages have often been argued to be a major factor explaining labor-intensive inward FDI flows to developing economies. However, unit labor costs is a better instrument to denote competitiveness, albeit it is more effective if comparisons are made between like industries. Using average Singaporean monthly wages as the base, Table 10 shows that the share of average manufacturing wages of China, China Hong Kong, India, Malaysia, Myanmar (only by gender breakdown), Philippines and Thailand. Data for Cambodia, Laos and Vietnam were not available.

Figure 11: Labor Productivity Differentials, China Against Southeast Asia, 1960-99

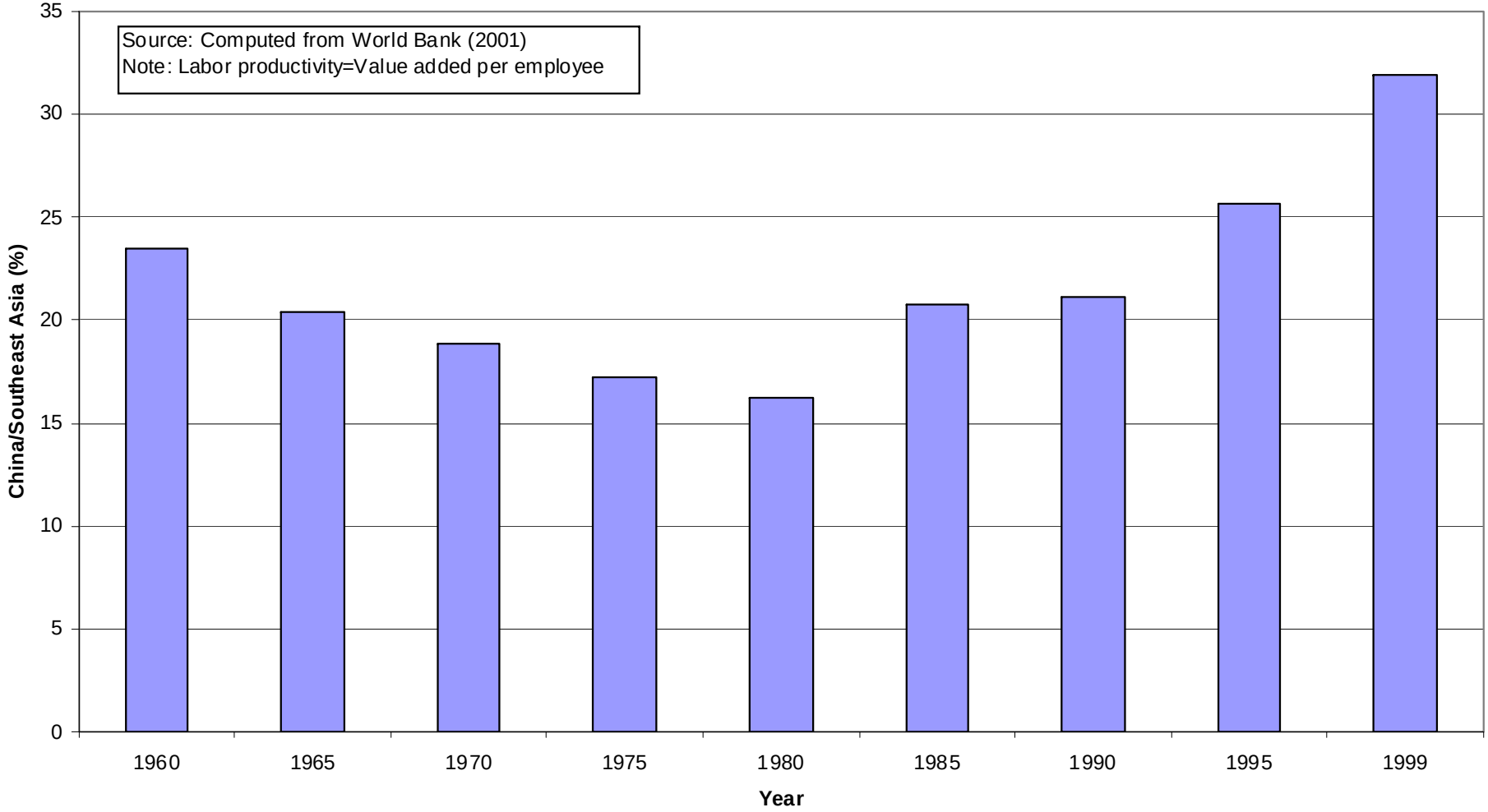


Figure 12: Average Annual Labor Productivity Growth, 1960-99

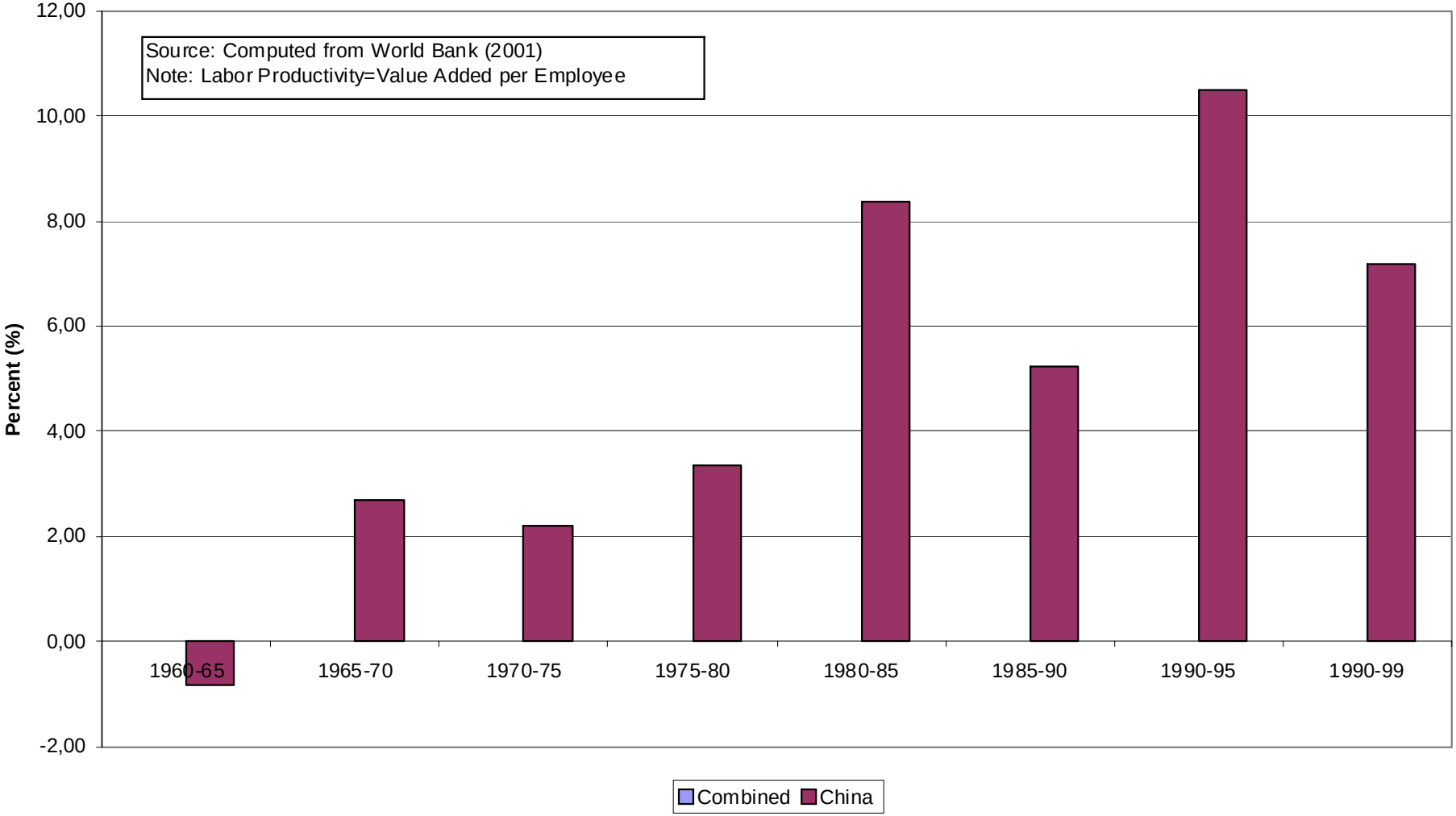


Table 10: Manufacturing Wage Differentials, 1986-97 (Singapore=100)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
China	6.9	6.6	7.2	7.0	4.7	4.0	4.1	4.3	3.2	NA	NA	NA
HK	91.2	95.8	94.9	94.7	89.7	86.2	81.9	83.3	79.2	70.8	70.0	74.5
India	15.8	13.9	11.9	8.1	7.3	5.1	3.5	2.9	2.3	2.5	NA	NA
Malaysia	55.0	51.9	42.7	37.1	31.7	29.1	30.1	29.3	27.1	26.2	NA	NA
Philippines	23.9	25.7	25.6	24.8	22.9	19.6	20.4	18.4	18.2	17.0	NA	NA
Singapore	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Thailand	22.3	NA	NA	18.3	17.0	16.1	15.2	14.5	12.9	13.2	13.2	11.7

Note: Monthly wages in national currencies converted to US dollars using end year exchange rates.

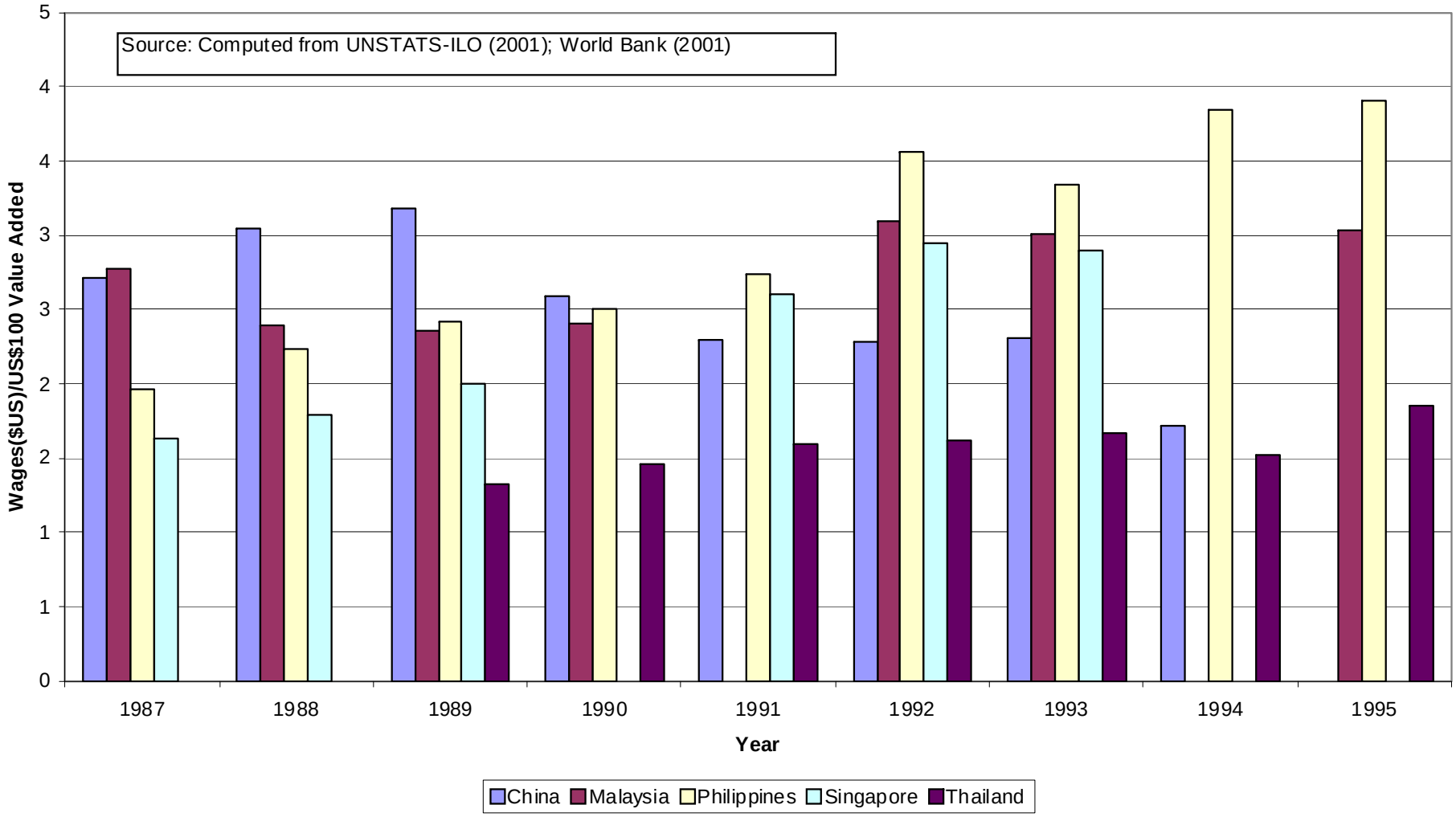
Source: Computed from UNSTATS-ILO (2001)

Table 11: Annual Average Growth in Monthly Manufacturing Wages, Value Added and Unit Labor Costs, 1980-97

	Wages/Employee				VA/Employee			Wages/VA		
	1980-87	1987-90	1990-93	1993-97	1987-90	1990-93	1993-97	1987-90	1990-93	1993-97
China	-4.4	4.7	9.9	NA	6.4	14.3	12.5	-1.2	-3.8	NA
Indonesia	NA	NA	NA	NA	1.8	5.9	3.5	NA	NA	NA
Malaysia	5.2	-0.7	10.5	10.1	4.2	2.6	8.6	-3.5	7.8	0.4
Philippines	1.1	12.7	5.4	11.9	3.8	-4.2	2.4	6.3	10.0	8.2
Singapore	NA	17.2	13.4	10.5	4.2	5.9	NA	5.4	5.6	NA
Thailand	8.4	7.0	7.6	4.7	7.2	3.0	4.9	-0.4	4.4	-0.2

Source: Computed from World Bank (2001); UNSTATS-ILO (2002)

Figure 13: Unit Labor Cost Comparisons, Manufacturing, 1987-95



Singaporean wages remained higher than that of the combined region. China's average monthly wages were comparable to that of only India, though China's sustained rapid growth has translated in its wages outstripping India's from 1992. However, China's wage rate remains much lower than that of the Southeast Asian economies in Table 10. With the exception of the period 1980-87, Chinese average wages grew strongly in the periods 1987-90 and 1990-93, but its manufacturing labor productivity grew much more in both periods (see Table 11).

Southeast Asia performed better when the more important variable, i.e. unit labor cost, is compared (see Figure 11). Manufacturing unit labor costs in China exceeded that of Malaysia, Philippines, Singapore and Thailand in the period 1988-90. While China's superiority in unit labor costs is much less and only exceeded that of Malaysia, Philippines and Singapore from 1991, it shows a trend fall after 1989 (see Table 11). Even though Thailand has continuously performed better than China in the period 1989-94, the gap has consistently narrowed. China's unit labor costs declined in 1987-90 and 1990-93. Unit labor costs involving the Southeast Asian economies – especially after 1990 – have fared worse than China's. If China maintains its greater increases in labor productivity compared to wage rise, it will add serious pressure on Southeast Asian labor markets. These developments suggest that China's greater integration in global and regional markets will raise competitive pressure on Southeast Asian labor markets.

Trade Unions and Labor Standards

The increased pressure on labor demand is likely to intensify competition with a consequent weakening of trade unions and downward spiral on wages in Southeast Asia. The impact on the individual economies would be different because of the diversity of institutional arrangements involving trade unions and workers, and labor standards. Despite the generally stronger institutional participation by trade unions, the underdeveloped status and low-income levels in transitional economies has left labor standards generally poor. Even child labor is most rampant in the transitional economies. Unless effective strategies are launched, these conditions may weaken in the initial phase as stronger competition is unleashed from greater integration.

Trade unions tend to enjoy greater representation in the transitional economies of China, and Vietnam owing to strong antecedents with the politburo. Laos, Myanmar and Cambodia lacked similar histories. Singapore has managed to integrate trade union involvement in the political process since 1969 and hence also enjoys strong union densities (Wong, 1998; Rasiah and Chua, 1998). Democratization of the labor movement after the collapse of the Marcos regime

did not produce a similar impact in Philippines. Rivalry among trade unions has undermined their collective ability to participate effectively on the negotiating table with employers and the government. Indonesia is currently facing a similar process of democratization following the collapse of the Suharto regime, showing a weakening of trade union institutions. Malaysia and Thailand – the latter despite considerable democratization since the late 1990s – have faced general exclusion from the political process.

Trade unions in Indonesia, Malaysia, Philippines and Thailand are reporting pressure from multinational corporations to keep their activities down. There is already increasing threat from these companies to relocate to China and Vietnam. In fact these companies could also play one location with another to undermine the trade union power and prevent efforts to improve labor standards. The lack of strong trade union representation and coordination between them has actually reduced many of them to passive rather than active actors in the operations of multinational corporations. Only Singapore and to some extent Vietnam has managed to achieve stronger representation – facilitated by their active participation in the political process (see Rasiah and Chua, 1998).

Governments will be hard-pressed to contain trade union activity in countries such as Malaysia where the Malaysian Trade Union Congress' (MTUC) struggle is still capped strongly. With a smoother integration in the political process, the National Trade Union Congress (NTUC) might intensify upgrading efforts in Singapore in addition to becoming even more selective in its immigration policies. The loose framework in Philippines and Indonesia - where democratization has taken place without significant institutional development - may actually widen the gap in the already created dual labor market (Rasiah and Chua, 1998). The informal low wage and undefined labor market segment could expand leaving workers more vulnerable to retrenchments that follow crises. Labor exports may intensify to overcome persistent unemployment from reaching high levels domestically. Overseas contract workers contributed the major share of GNP of Philippines for a number of years now (Ofreneo, 1998). Indonesia has already experienced fast growth in workers seeking jobs abroad. Thailand could face similar pressures soon. However, given the constraints labor-importing economies in the region are currently facing (e.g. Singapore, Malaysia and Thailand), governments are likely to increase their already aggressive means of keeping illegal migration out.

Meanwhile, the pursuit of low wages may reverse child employment trends in Southeast Asia. Children aged 10-14 working in Brunei and Singapore ended in Brunei and Singapore by the 1980s (see Table 12). The incidence fell gradually in the other economies, though it remained high in Cambodia, Myanmar, Laos and Thailand. Child employment could be aggravated in these economies as low

skill-intensity firms seek cheaper and short-termist wage labor from the unorganized informal labor markets.

Table 12: Share of Child Labor in 10-14 Age Group , 1960-99 (%)

	1960	1970	1980	1990	1995	1999
Brunei	9.12	7.51	0.00	0.00	0.00	0.00
Cambodia	28.43	27.48	26.56	25.59	24.66	23.92
China	43.17	39.03	30.48	15.24	11.55	8.60
Indonesia	22.11	18.52	13.49	11.30	9.55	8.17
Malaysia	10.12	8.38	7.97	3.99	3.16	2.50
Myanmar	31.55	29.72	27.91	26.07	24.51	23.25
Laos	35.00	33.01	31.03	29.05	27.20	25.73
Philippines	21.40	17.65	14.10	10.64	8.04	5.96
Singapore	5.58	3.44	1.71	0.00	0.00	0.00
Thailand	35.19	30.20	25.21	20.23	16.22	13.01
Vietnam	36.17	26.27	21.78	13.01	9.12	5.99

Source: Extracted from World Bank (2001)

Greater integration of China with Southeast Asia could obviously bring wide ramifications for on the latter's labor markets. If greater integration enhances complementarities and structural interdependence to encourage stronger industrial relations frameworks, it could stimulate a trend fall in unemployment and bring improvements in labor standards. However, the power asymmetry between institutions, location endowments and governments, and industry dynamics that favor agglomeration of production in particular locations is likely to intensify competition in final and intermediate product markets. The past suggests that China's labor productivity could soon overtake the neighbors. Governments in Southeast Asia could face greater pressure to prevent unemployment and underemployment from rising. Trade unions would be hard pressed to sustain membership and labor standards in the face of greater labor market disruptions.

5 Conclusions and Recommendations

It appears that China's greater integration in world and regional markets would raise competitive pressure on the Southeast Asian labor markets. While China's huge domestic market – expected to expand strongly with rapid increases in per capita incomes – would increase effective demand, its large labor force and strong participation in most manufacturing industries suggest that it will be very difficult for Southeast Asian economies to take advantage of it. The transitional economies of especially Myanmar, Cambodia and Vietnam could still retain low technology industries because of their low wages. With its small labor force, Laos might become more resource dependent as cheaper imports from China, Cambodia and Vietnam flood its market. However, weak basic infrastructure and their smaller labor forces could still hold them back rapid growth in Cambodia, Myanmar and Vietnam. Philippines and Indonesia could face serious

restructuring – especially the relocation of labor-intensive garment, textile and electronics to China and Vietnam. Malaysia and Thailand have good basic infrastructure but lack sufficient institutional deepening to differentiate their industries from China's. The increasing focus on R&D in China suggests that these economies could face serious pressure even involving high tech industries. Singapore is still favorably positioned to retain high tech activities. However, given China's sheer size and past rates of investment in R&D, production of scientists and engineers and patenting, Singapore's advantage may not continue for long. These implications are unlikely to destroy the Southeast Asian economies as their past resilience in handling crises have demonstrated. Instead they are outline to show that Southeast Asian economies will have to work harder to sustain improvements in their labor markets.

In light of the competitive pressure China's greater economic integration with the global economy requires important considerations for Southeast Asia to catch rather than be swept aside by competitive wave. This pressure becomes all the more important considering China's dominance in low technology activities, rising strength in high technology activities, and relentless emphasis on building its R&D infrastructure.

To overcome the competitive pressure brought by China, the Southeast Asian economies could coordinate cross border economic activities. A good strategy is to cooperate with China to integrate economic activities synergistically to achieve the regions common goals. Similar initiatives through the active promotion of growth triangles since 1989 have not proved very successful as economies retained their individual interests at the expense of systemic synergies. Southeast Asian economies must invest more on strengthening their human capital so that the increasing knowledge content would enhance labor productivity and commensurate increases in wages offer the effective demand for engaging a wider spectrum of labor force in the combined region. The other alternative will be to build particular niches to differentiate industrial specialization – either based on individual national strategies or collectively with two or more economies – to establish long term comparative advantage over China and the rest of the world. This is not easy as China enjoys enormous size to launch new products in almost every industry, which Southeast Asia plans to develop.

Increase Investment in Basic and R&D Infrastructure

Southeast Asian economies must increase their emphasis on human capital development – both education and technical training. Given the lack of funds, there must be a further shift in government expenditure from military spending to education and training, and R&D activities. In addition, Indonesia,

Philippines and the transitional economies of Cambodia, Laos, Myanmar and Vietnam must also improve their basic infrastructure.

The Southeast Asian response should be to raise labor productivity by reducing unit labor costs rather than suppressing a rise in wage rates. Education and training, and participation in innovation-related activities are key to achieving this goal. The latter will be difficult to achieve systematically the lower the per capita income. While basic expenditure will continue to be important for the poorer economies, there must be increasing effort to build the high tech infrastructure so that a horizontal division of labor eventually could be developed with China and the developed economies. Singapore is well ahead. Malaysia has the resources, but requires considerable deepening (including expansion in high tech human capital) and improvement in firm-institution coordination relationships (see Rasiah, 2002).

Strengthen Regional Coordination

China and the Southeast Asian economies must strengthen dialogue to coordinate industrial restructuring. Given the stormy effects of unregulated trade under conditions of prevalence of free riders and power asymmetry between competitors, coordination is important to prevent predatory conduct in product and factor markets. Labor markets are not only notoriously rigid, they are also characterized by substantial information imperfections.

This problem would particularly become critical when involving multinational corporations. It is important to recognize that Southeast Asian economies cannot on their own stand up against gigantic multinational corporations who could play one location against another to minimize private costs while leaving the social costs to the populations. Trade unions should be included as active participants in regional consultation councils such as the AFTA council.

Hence, inter-government coordination is necessary for the creation of a competitive institutional environment that works on long rather than short run goals. Social responsibility is vital to ensure long run goals and hence the incorporation of labor's interests in Southeast Asian and Chinese industrial strategies must be important.

Include Trade Unions as a Critical Participant in National Policies

In Singapore and Vietnam trade unions are an important integral part of the political process. It can be said that labor standards in Singapore are arguably the best in the region combined. Singapore has not only managed to ensure rapid wage growth alongside its rapid GDP growth, effective social tripatism has helped the NTUC coordinate such thorny issues such as economic downswings and retrenchments smoothly. Singapore has continued to experience industrial

restructuring, but has managed to eliminate absolute poverty and offer access to basic needs to all its citizens. While its special initial conditions, strategic location and smallness in size is often viewed as unworthy for extracting lessons, there is no economic basis to reject it purely on those grounds. While size and structural differences make inferences difficult, the other economies could attempt incorporating labor movements in the political process but taking cognizance of the their own unique structures and histories. After all employment creation and better living standards are central to all government goals the world over.

Strengthen ILO's Core Conventions

The International Labor Organization (ILO) has long coordinated labor issues. However, its influence in the global governance of labor standards has generally been invisible as a consequence of the reluctance of its members to use it as a major platform to address critical issues.

Developing economies in general and the economies of the combined region in particular could cooperate to seek ILO's help in protecting exports against unfair pressure from the developed economies.

[1] The other agreements such as the Trade Related aspects of Intellectual Property Rights (TRIPs) and the General Agreement on Trade in Services (GATS) are also important but its impact on Southeast Asia may be similar to China.

[2] See Popper (1995) for a lucid explication of the limitations of history in understanding the future.

[3] Popper (1957) to some extent also misunderstood the rationale behind Marx's analysis of historical materialism to explain the emergence of class societies.

[4] Computed from World development indicators, World Bank (2001)

[5] Author interviews (2001-2002).

[6] Patents applied by foreigners were excluded to show only domestic capabilities and to avoid double counting as firms may apply for the same patents in different countries.

[7] Author interviews (2001-2002).

[8] Computed from World Bank (2001).

[9] Author interviews (2001-2002).

[10] Author interviews in Jakarta and Manila in February 1998, which was conducted for the FES.

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